

# **ATTACHMENT 6**

## **Monitoring, Assessment and Performance Measures**

### **ATTACHMENT 6 CONTENTS**

6	Attachment 6 – Monitoring, Assessment and Performance Measures .....	6-3
6.1	Urban Bakersfield Water Use Efficiency Project .....	6-4
6.2	Tehachapi Regional Water Use Efficiency Project .....	6-7
6.3	Snyder Well Intertie Pipeline for Irrigation and Nitrate Removal Project .....	6-9
6.4	Kern Water Bank Recharge and Recovery Enhancement Project.....	6-11
6.5	Sycamore Road Flood Reduction Project .....	6-14

### **LIST OF TABLES**

Table 6-1: Urban Bakersfield Water Use Efficiency Project Performance Measures Table .....	6-5
Table 6-2: Tehachapi Regional Water Conservation Project Performance Measures Table ....	6-8
Table 6-3: Snyder Well Intertie Pipeline Project Performance Measures Table .....	6-10
Table 6-4: Kern Water Bank Recharge and Recovery Enhancement Project Performance Measures Table .....	6-12
Table 6-5: Sycamore Road Flood Reduction Project Performance Measures Table .....	6-15



## **6 Attachment 6 – Monitoring, Assessment and Performance Measures**

*Describe the performance measures that will be used to quantify and verify project performance. Provide a discussion of the monitoring system to be used to verify project performance with respect to the project benefits or objectives identified in the Proposal. Indicate where the data will be collected and the types of analyses to be used. Include a discussion of how monitoring data will be used to measure the performance in meeting the overall goals and objectives of the IRWM Plan.*

*This attachment presents the planned project monitoring, assessment, and performance measures that will demonstrate that the Proposal will meet its intended goals, achieve measurable outcomes, and provide value to the State of California. The purpose of Attachment 6 is to provide a preview of the information that would go into a monitoring plan.*

*For Attachment 6, applicants are required to submit Project Performance Measures Tables specific to their Proposal. Project Performance Measures Tables should include the following items:*

- *Project goals*
- *Desired outcomes*
- *Targets – measurable targets that are feasible to meet during the life of the project(s)*
- *Performance indicators – measures to evaluate change that is a direct result of the project being built*
- *Measurement tools and methods – to effectively track performance*

*A Project Performance Measures Table should be submitted for each project included in the Proposal. When multiple projects carry the same goals and outcomes, a combined table can be developed to cover those projects. The measurement parameters (metrics) should fit the performance evaluation needs of the Proposal. The metrics may include additional acre-feet of water supply, improved water supply reliability and flexibility, water quality measurements, measurement-based estimates of pollution load reductions, acres of habitat successfully restored, feet of stream channel stabilized, groundwater level measurements, stream flow measurements, improved flood control, or other quantitative measures or indicators.*

*If the grant application is successful, upon implementation of the proposal, the monitoring tables should be used to develop the proposal monitoring plan.*

## **6.1 Urban Bakersfield Water Use Efficiency Project**

For the Monitoring Table that follows, a summary of the Monitoring System, Data Management and Analyses and Monitoring for IRWM Plan Goals and Objectives for each project is described.

Monitoring System: The City will obtain water meter data for all parks and evaluate actual and historic usage. In addition, summary lists of customer audits, and rebates distributed, and number of students and teachers trained will be maintained. As part of the reporting task for this grant, collected data will be compiled and analyzed, and results will be used to assess progress toward project objectives, as described in Attachment 3 – Work Plan. The data will also be presented as part of the IRWM Grant quarterly reporting and in the Project Completion Report. Estimated water conservation resulting from UBAK1 and UBAK2 program implementation will be tracked over the required 10 year period and reported in the annual Project Performance Reports per the contract with DWR.

Data Management and Analyses: As discussed above, the City will collect water meter records and water purchased for all parks as well as records of audits, rebates, and number of students/teachers receiving education. Data will be maintained and conveyed in spreadsheets, hard-copy, and/or PDFs. Water meter data will be analyzed before and after Maxicom installation and the adjustments/improvements conducted to assess water use reductions will be documented. The data will be reviewed to evaluate which measures may have been most effective at reducing water use.

Monitoring for IRWM Plan Goals and Objectives: The Data Management and Analyses findings will be compared against the regional objectives of the Kern IRWM Plan, as discussed in the work plan.

**Table 6-1: Urban Bakersfield Water Use Efficiency Project Performance Measures Table**

Project Goals	Desired Outcomes	Performance indicators	Measurement tools and methods	Targets
<p>Develop a conservation program that helps fulfill the City's SBX7-7 requirements of reducing per capita water use to 256 gpcd by 2020.</p> <p>Develop a conservation program that fulfills ID4 and the City's AB 1420 requirements.</p> <p>Promote programs that enable residential and commercial customers to improve water use efficiency in a cost-effective manner.</p> <p>Promote efficient use of water through appropriate incentive programs.</p>	<ul style="list-style-type: none"> <li>Decreased outdoor water use and overall water demand in the Region</li> <li>Retrofit 18 Parks with automated ET controllers.</li> <li>Provide commercial and residential rebates (see <b>Table 3.3-2</b> for quantities)</li> <li>Provide large landscape and residential audits</li> <li>Incentivize purchase of qualified low water use products</li> <li>Improve consumer acceptance of high-efficiency fixtures</li> <li>Increase product availability and move the market to the next segment of efficient fixtures</li> <li>Expand education programs</li> </ul>	<ul style="list-style-type: none"> <li>Quantification of the decrease in water demand compared to previous years</li> <li>Quantification of Parks retrofit</li> <li>Quantification of rebates/vouchers distributed</li> <li>Quantification of audits performed.</li> <li>Development of curriculum, Quantification of grade 7 through 12 students reached, teachers that received training and project WET workshops.</li> </ul>	<ul style="list-style-type: none"> <li>Comparison of actual water usage vs. historical usage</li> <li>Record of Parks retrofit</li> <li>Record of rebates/vouchers distributed</li> <li>Record of audits performed.</li> <li>Record of students reached, teachers that received training and project WET workshops.</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of water demand over the project lifetime</li> <li>Distribution of toilet/urinal (42), clothes washers (21) and pop up nozzle (10,000), smart controllers (60) rebates and conservation kits (76)</li> <li>Large landscape surveys (6) and reports (34) and ongoing residential audits</li> <li>Development of new urban water use efficiency curriculum, 3 Project WET workshops, and expansion of schools visited within ID4 to include 7-12 grades</li> </ul>

<b>Project Goals</b>	<b>Desired Outcomes</b>	<b>Performance indicators</b>	<b>Measurement tools and methods</b>	<b>Targets</b>
Protect Surface Water and Groundwater Quality	<ul style="list-style-type: none"> <li>Reduced irrigation run-off into the Groundwater Basin</li> </ul>	<ul style="list-style-type: none"> <li>Quantification of existing water use avoided as a result of the project</li> </ul>	<ul style="list-style-type: none"> <li>Volume delivered to Parks and to water customers; comparison of actual water usage vs. historical usage</li> <li>Record of pop up nozzle (10,000), smart controllers (60) rebates/vouchers</li> <li>Record of Large landscape surveys (6) and reports (34)</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of water demand and water dependence by approximately 2,760 AF (outdoor savings).</li> </ul>
Educate public on water conservation	<ul style="list-style-type: none"> <li>Decreased outdoor water use and overall water demand in the Region</li> <li>Increased number of residents and businesses who understand what types of plants to use to reduce water consumption</li> </ul>	<ul style="list-style-type: none"> <li>Number of schoolchildren reached grades 7-12</li> <li>Number of teachers provided training</li> <li>Increase awareness of general water conservation principles, as well as existence of the above water conservation programs, throughout local communities.</li> <li>Expand education programs to include grades 7-12.</li> </ul>	<ul style="list-style-type: none"> <li>Record of schoolchildren reached grades 7-12</li> <li>Record of teachers provided training</li> </ul>	<ul style="list-style-type: none"> <li>7-12 curriculum developed</li> <li>Provide education for 3,000 schoolchildren</li> <li>Provide training for 20 teachers</li> </ul>

## **6.2 Tehachapi Regional Water Use Efficiency Project**

For the Monitoring Table that follows, a summary of the Monitoring System, Data Management and Analyses and Monitoring for IRWM Plan Goals and Objectives for each project is described.

Monitoring System: The TCCWD will obtain water meter data for a sample of customers receiving either direct-install or rebates within each participating agency to evaluate actual and historic usage. In addition, summary lists of customer water conservation audits, and rebates distributed will be maintained. As part of the reporting task for this grant, collected data will be compiled and analyzed, and results will be used to assess progress toward project objectives, as described in Attachment 3 – Work Plan. The data will also be presented as part of the IRWM Grant quarterly reporting and in the Project Completion Report. Estimated water conservation resulting from the implementation of these programs will be tracked over the required 10 year period and reported in the annual Project Performance Reports per the contract with DWR.

Data Management and Analyses: As discussed above, TCCWD will collect water meter and water purchase for a sample of customers as well as records of audits, rebates, and students/teachers receiving education. Data will be maintained and conveyed in spreadsheets, hard-copy, and/or PDFs. Water meter records provided by the agencies will be analyzed before and after toilet installation. The data will be reviewed to evaluate which measures may have been most effective at reducing water use.

Monitoring for IRWM Plan Goals and Objectives: The Data Management and Analyses findings will be compared against the regional objectives of the Kern IRWM Plan as discussed in the Workplan.

**Table 6-2: Tehachapi Regional Water Conservation Project Performance Measures Table**

<b>Project Goals</b>	<b>Desired Outcomes</b>	<b>Performance indicators</b>	<b>Measurement tools and methods</b>	<b>Targets</b>
<p>Pursue and implement cost effective water use efficiency programs</p> <p>Optimize local management of water resources to improve water supply reliability.</p> <p>Improve consumer acceptance of high-efficiency fixtures.</p> <p>Improve affordability of high-efficiency fixtures.</p>	<ul style="list-style-type: none"> <li>• Reduce water consumption by about 109 AFY or 2,776 AF over the lifetime of the project</li> <li>• Install 1,000 UHETs/HETs.</li> <li>• Conduct 1,000 audits.</li> <li>• Provide efficient fixtures (showerheads, aerators etc) and fix leaks as needed.</li> <li>• Rebate 950 residential and commercial toilets with HETs and UHETs</li> </ul>	<ul style="list-style-type: none"> <li>• Quantification of rebates distributed</li> <li>• Quantification of audits performed.</li> <li>• Quantification of toilets installed</li> </ul>	<ul style="list-style-type: none"> <li>• Comparison of actual water usage vs. historical usage</li> <li>• Record of rebates distributed</li> <li>• Record of audits performed.</li> <li>• Record of toilets installed</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of water demand over the project lifetime of about 2,776 AF</li> <li>• Installation of 1,000 toilets</li> <li>• 1,000 home surveys</li> <li>• 950 HET and UHET rebates provided</li> </ul>
<p>Provide service to the City of Tehachapi's DAC</p>	<ul style="list-style-type: none"> <li>• Reduce potable water consumption by approximately 81 AFY, 2,042 AF over the device life</li> <li>• Provide free fixtures, audits and installation</li> </ul>	<ul style="list-style-type: none"> <li>• Quantification of toilets installed</li> <li>• Quantification of audits installed</li> </ul>	<ul style="list-style-type: none"> <li>• Record of audits performed.</li> <li>• Record of toilets installed</li> <li>• Customer satisfaction survey</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of water demand over the project lifetime of about 2,042 AF</li> <li>• Installation of 1,000 toilets</li> <li>• 1,000 home surveys</li> <li>• Positive customer satisfaction reports.</li> </ul>



### **6.3 Snyder Well Intertie Pipeline for Irrigation and Nitrate Removal Project**

For the Monitoring Table that follows, a summary of the Monitoring System, Data Management and Analyses and Monitoring for IRWM Plan Goals and Objectives for each project is described.

Monitoring System: The City of Tehachapi will obtain water meter data for the school athletic fields for actual water usage. In addition, periodic samples of water quality from the Snyder Well will be collected and analyzed for nitrate. As part of the reporting task for this grant, collected data will be compiled and analyzed, and results will be used to assess progress toward project objectives, as described in Attachment 3 – Work Plan. The data will also be presented as part of the IRWM Grant quarterly reporting and in the Project Completion Report. Estimated water conservation resulting from the implementation of these programs will be tracked over the required 10 year period and reported in the annual Project Performance Reports per the contract with DWR.

Data Management and Analyses: As discussed above, the City will collect water meter data for the parks and water quality data for the periodic sampling. Data will be maintained and conveyed in spreadsheets, hard-copy, and/or PDFs. Water meter data will be analyzed against expected usage. The data will be reviewed to evaluate which measures may have been most effective at reducing water use.

Monitoring for IRWM Plan Goals and Objectives: The Data Management and Analyses findings will be compared against the regional objectives of the Kern IRWM Plan as discussed in the Workplan.

**Table 6-3: Snyder Well Intertie Pipeline Project Performance Measures Table**

<b>Project Goals</b>	<b>Desired Outcomes</b>	<b>Performance indicators</b>	<b>Measurement tools and methods</b>	<b>Targets</b>
Shift irrigation demand at Jacobson Junior High from the City of Tehachapi to Snyder Well/TCCWD	<ul style="list-style-type: none"> <li>Approximately 65 AF per year reduction in annual demands for the City</li> </ul>	<ul style="list-style-type: none"> <li>Quantification of water supplied to the school by TCCWD</li> <li>Quantification of water supplied to the school by the City</li> </ul>	<ul style="list-style-type: none"> <li>City water meter readings for the school</li> <li>Meters on service laterals read by TCCWD</li> </ul>	<ul style="list-style-type: none"> <li>65 AF annual reduction in City water demands</li> </ul>
Beneficial use of nitrate contaminated groundwater	<ul style="list-style-type: none"> <li>Approximately 1,000 lbs of nitrate removed from the groundwater aquifer</li> </ul>	<ul style="list-style-type: none"> <li>Quantification of the total amount of nitrate applied via Snyder Well water to the athletic fields</li> </ul>	<ul style="list-style-type: none"> <li>Using nitrate concentration sample results and TCCWD metered water deliveries to calculate the total amount of nitrate applied to the athletic fields</li> </ul>	<ul style="list-style-type: none"> <li>1,000 lbs of annual nitrogen fertilizer supplied by nitrate rich groundwater</li> </ul>
Water cost savings for Jacobson Junior High	<ul style="list-style-type: none"> <li>Reduction in annual water costs for the Jacobson Junior High of approximately \$45,000</li> </ul>	<ul style="list-style-type: none"> <li>Water bill records from City and TCCWD</li> </ul>	<ul style="list-style-type: none"> <li>Comparison of historical invoices with invoices generated once the system is operational</li> </ul>	<ul style="list-style-type: none"> <li>Approximately \$45,000 annual savings</li> </ul>
Reduction in City peak monthly demand	<ul style="list-style-type: none"> <li>Reduce peak monthly daily demand by approximately 105 gpm</li> </ul>	<ul style="list-style-type: none"> <li>City peak month water demand information</li> </ul>	<ul style="list-style-type: none"> <li>Comparison of with and without-project peak monthly demands with growth factored into the comparison</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 105 gpm reduction in City peak month demand</li> </ul>
Development of a correlation between pumping rates and nitrate concentrations for Snyder Well	<ul style="list-style-type: none"> <li>Determine a relationship that predicts the nitrate concentrations of Snyder Well based on volume pumped</li> </ul>	<ul style="list-style-type: none"> <li>Volume of water pumped and nitrate concentrations</li> </ul>	<ul style="list-style-type: none"> <li>Measurement of volume of water pumped compared with nitrate concentrations</li> </ul>	<ul style="list-style-type: none"> <li>Determination how pumping the Snyder Well more often will decrease nitrate concentration</li> </ul>

#### **6.4 Kern Water Bank Recharge and Recovery Enhancement Project**

Performance measures used to quantify and verify project performance will be developed by KWBA staff after Project funding is secured to match the Project goals, with desired outcomes, targets, and performance indicators, utilizing measurement tools and methods to effectively track performance as indicated in the table included in this section of the Proposal.

**Monitoring System:** Project goals related to recharge rates will have a measurement system to firstly validate initial net new wetted acres of pond constructed from survey data collected during construction and deduction of wetted areas in the new pond area during prior recharge operations from aerial photographs. Secondly, as the new ponds are utilized for recharge after pond construction, water flow measurements taken at the inlet structure to Pond 5 and previously determined wetted area calculations will be used during annual reports to DWR to validate recharge rates and volumes.

**Data Management and Analyses:** Likewise Project goals related to recovery from the wells and increased water supply for KWBA Members, as well as overdraft correction and water remaining “banked” in underground storage will be tracked by deducting volumes of water recovered measured by totalizing flow meters on each new well and following the mandatory KWB MOU requirements for accounting for overdraft correction along with the Kern Fan Monitoring Committee’s mandatory water accounting procedures (including periodic preparation of operations reports of KWB operations). Furthermore, KWBA staff will prepare annual Project Performance Reports to DWR required by the grant contract during the first 10 years after construction, including an accounting of recharge and recovery from Project facilities, overdraft correction and banked water accounting, with projections that factor the representativeness of first 10 years’ hydrology to a 50 year Project life. KWBA staff will include commentary regarding non-quantifiable benefits occurring as a result of quantifiable benefits, including discussion of intermittent wetland habitat for waterfowl and increased flood protection in the the required annual Project reports utilizing information from its mandatory HCP annual reports, and from readily available anecdotal reports prepared by third parties concerning flooding of low lying developed lands in the San Joaquin Valley.

**Monitoring for IRWM Plan Goals and Objectives:** The Data Management and Analyses findings will be compared against the regional objectives of the Kern IRWM Plan as discussed in the Workplan.

**Table 6-4: Kern Water Bank Recharge and Recovery Enhancement Project Performance Measures Table**

<b>Project Goals</b>	<b>Desired Outcomes</b>	<b>Performance indicators</b>	<b>Measurement tools and methods</b>	<b>Targets</b>
Construct 189 net acres of new recharge ponds with an average of 0.3 ft/day recharge rate	<ul style="list-style-type: none"> <li>Wetted area of new ponds will increase by net of 189 acres, and long-term average recharge rate of 0.3 ft/day at new ponds.</li> <li>Recharge volumes will total 235,000 acre-feet during 50 years.</li> </ul>	<ul style="list-style-type: none"> <li>Wet area of ponds after Project versus wet area before Project, prolonged fill rate under sustained typical operations will average 0.3 ft/day.</li> <li>Recharge volumes during first 10 years projected to 50 years total at least 50 years.</li> </ul>	<ul style="list-style-type: none"> <li>Validate design water surface area using survey data from pond construction and deduct area measurements from aerial photos taken during recharge period before Project.</li> <li>Daily water flow measurements taken at inlet to Pond 5, converted to volume then divided by net new wet area to calculate to average 0.3 ft/day rate.</li> <li>Recharge volumes calculated from flow measurements during first 10 years, projected to 50 years (when considering hydrology) totals at least 235,000 acre-feet.</li> </ul>	<ul style="list-style-type: none"> <li>Gross wetted area minus prior wetted area of new ponds at least 189 acres, and minimum 0.3 ft/day long-term average recharge rate at new ponds.</li> <li>Recharge volume totaling 235,000 acre-feet over 50 years.</li> </ul>
Construct 3 new wells with an average recovery rate of 5 cfs/well	<ul style="list-style-type: none"> <li>Average of 3 wells long-term recovery rate of 5 cfs/well</li> </ul>	<ul style="list-style-type: none"> <li>3 new well flow rates average a total of 15 cfs during sustained operation under typical conditions</li> </ul>	<ul style="list-style-type: none"> <li>Readings of 3 new well flow meter totalizers during first 10 years calculate to average of 5 cfs per wells during recovery periods.</li> </ul>	<ul style="list-style-type: none"> <li>Total of 15 cfs long term average recovery rate for 3 new wells</li> </ul>

<b>Project Goals</b>	<b>Desired Outcomes</b>	<b>Performance indicators</b>	<b>Measurement tools and methods</b>	<b>Targets</b>
Recovered water from the new wells provides increased supplies to KWBA Members by 75,200 acre-feet during life of project	<ul style="list-style-type: none"> <li>Recovered water for KWBA members total minimum of 75,200 during life of project</li> </ul>	<ul style="list-style-type: none"> <li>Recovered water volumes from 3 new wells during first 10 years projects to at least 75,200 acre-feet considering hydrology</li> </ul>	<ul style="list-style-type: none"> <li>Readings of new well flow meter totalizers add up to approximately 1/5<sup>th</sup> of 75,200 acre-feet, and projections to 50 years are made with adjustment for hydrology of those 10 years.</li> </ul>	<ul style="list-style-type: none"> <li>Recovered water for KWBA members total minimum of 75,200 during life of project</li> </ul>
Water not recovered by KWBA members provides minimum of 4% overdraft correction benefits to others and future dry year supplies for KWBA Members	<ul style="list-style-type: none"> <li>Minimum 4% of recharged water goes to overdraft correction</li> </ul>	<ul style="list-style-type: none"> <li>Kern Fan Monitoring Committee accounting of recharge volumes for overdraft correction in Kern Fan Operations Report</li> </ul>	<ul style="list-style-type: none"> <li>Account 4% of recharge volumes to overdraft correction during preparation of Kern Fan Operations Report</li> </ul>	<ul style="list-style-type: none"> <li>Minimum 4% of recharged water goes to overdraft correction</li> </ul>
127,000 Water Stored after 50 years	<ul style="list-style-type: none"> <li>Water recharged but not recovered for KWBA Members during Project life, nor evaporating or purchased for overdraft correction accumulates to minimum of 127,000 after 50 years</li> </ul>	<ul style="list-style-type: none"> <li>Underground storage volume calculation during first 10 years of operation projects to at least 127,000 acre-feet after 50 years considering typical hydrology</li> </ul>	<ul style="list-style-type: none"> <li>Calculations of underground storage remaining during annual reports to DWR during first 10 years of operation</li> </ul>	<ul style="list-style-type: none"> <li>127,000 “banked” in underground storage after deducting KWBA recovery, estimated pond evaporation, and overdraft correction purchases after 50 years</li> </ul>

## **6.5 Sycamore Road Flood Reduction Project**

For the Monitoring Table that follows, a summary of the Monitoring System, Data Management and Analyses and Monitoring for IRWM Plan Goals and Objectives for each project is described.

**Monitoring System:** The City of Arvin will collect photos, rain gauge information, and other data on the frequency, depth and duration of flooding. As part of the reporting task for this grant, collected data will be compiled and analyzed, and results will be used to assess progress toward project objectives, as described in the Attachment 3 – Work Plan for the project. The data will also be presented as part of the IRWM Grant quarterly reporting and in the Project Completion Report. Estimated water conservation resulting from the implementation of these programs will be tracked over the required 10 year period and reported in the annual Project Performance Reports per the contract with DWR.

**Data Management and Analyses:** As discussed above, the City will collect and maintain the data in spreadsheets/tables and photos to be compared against project objectives.

**Monitoring for IRWM Plan Goals and Objectives:** The Data Management and Analyses findings will be compared against the regional objectives of the Kern IRWM Plan, as discussed in the workplan.

**Table 6-5: Sycamore Road Flood Reduction Project Performance Measures Table**

<b>Project Goals</b>	<b>Desired Outcomes</b>	<b>Performance indicators</b>	<b>Measurement tools and methods</b>	<b>Targets</b>
Reduce annual flooding from < 10-year precipitation events	<ul style="list-style-type: none"> <li>• Eliminate road closures at Sycamore and Meyer</li> <li>• Allow safe access to crosswalks for school children/pedestrians</li> </ul>	<ul style="list-style-type: none"> <li>• Complete construction of pipeline and retention basin</li> </ul>	<ul style="list-style-type: none"> <li>• Frequency of road closures at Sycamore and Meyer</li> <li>• Frequency of access to crosswalks for school children/pedestrians</li> </ul>	<ul style="list-style-type: none"> <li>• Zero annual road closures from &lt; 10-year precipitation events</li> <li>• Access to crosswalks during &lt; 10-year precipitation events</li> </ul>
Reduce impact of 50-year and 100-year events	<ul style="list-style-type: none"> <li>• Reduce depth and duration of flooding in streets and mobile home park</li> </ul>	<ul style="list-style-type: none"> <li>• Depth of flooding in streets and mobile home park</li> <li>• Duration of flooding in streets and mobile home park</li> </ul>	<ul style="list-style-type: none"> <li>• Precipitation gage information</li> <li>• Tape measure and camera to measure depth of flooding</li> <li>• Camera date/time stamp to measure duration of flooding</li> <li>• Pumping rate and duration</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce depth to less than 1 feet of flooding during 50-year and 100-year events</li> <li>• Reduce duration to less than two days for 50-year and 10-year events</li> </ul>